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CHAL-0073

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20 May 1958

MEMORANDUM : Special Assistant to the Director for Planning and Development and Deputy Director, DPS/DCI

TO : Director of D and P, DPS/DCI

SUBJECT : Review of Photo Configuration Reliability

1. It is the intent of this memorandum to review the reliability of the various photo configurations at Detachments from 7 March to the present date and to indicate the type and causes of malfunctions.

2. **TRACER** - There were 67 missions (operational and test) run from early March to 18 May. These included photo, Kint and training missions using only the Tracer. Eleven malfunctions were experienced during the 67 missions, giving a reliability of 84%. The primary cause of malfunction was the metering micro switch. The fix was to add an resistor to the circuit to prevent overload and arcing. The last malfunction was at [] on 17 May when the Tracer malfunctioned during descent because of dirt in the relay contacts.

3. **A-1** - Very few missions were run with this configuration. From 15 June 1956 to 27 March 1958 only 34 missions, all test or training were accomplished. There were 10 malfunctions, giving a reliability of 71%. However, only on 2 occasions did two cameras fail during any one mission. Only one camera failed during each of the remaining 8 missions. The cause of failures in the 10 missions were attributed primarily to shutters (5), magazine (3) and personnel errors (2). The last mission, a training flight at [] on 27 March was successful, but it was a short mission.

4. **A-2** - A total of 15 missions were run during the period 11 March - 6 May 1958. With the exception of 2 counter stoppages, due to loose electrical connections and a shutter blade link arm breakage 15 cycles prior to end of mission all missions were completely successful. Because of the minor malfunction (counter stoppage) and the timing of the shutter malfunction for statistical purposes it can be stated the A-2 operated with a reliability of 100%.

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5. B - A total of 33 missions (training and operational) were flown with the modified "B"s between 7 March and 18 May 1958. There were 11 malfunctions during this period giving a reliability of 67%. Eight (8) of the failures were attributed to shutter malfunctions. All of shutter malfunctions were due to failure of the K-2 relay or to the deterioration of the nickel plating on the latch pin working surfaces which cause mis-latching or trip failure. Two (2) failures were caused by film wrapping around the metering roller. Both of these malfunctions occurred at [redacted] and was a direct result of climatic conditions. When recommended SOP's were adopted this type of failure was eliminated. The eleventh B mal-function (Mission 1409) was attributed to the failure of the camera tension servo microswitch, causing the film to wrap on the metering roll.

A. When the shutter malfunctions were discussed with [redacted] it became apparent we are again experiencing a quality control problem and a lethargic attitude in pre-flight and post-flight maintenance. [redacted] has promised to take action to remedy the above deficiencies.

WFS/DCI [redacted] bas

Distribution:

1. - Addressee
2. - Director of D and P
3. - Director of Operations
4. - [redacted]
5. - Chrono (Contracts)

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